

medical student, and took the membership of the College of Surgeons, as well as the licentiatehip of the Apothecaries' Society, in 1837. In the year 1839 he graduated at Heidelberg, and was appointed lecturer on *Materia Medica* at St. George's School of Medicine four years later. In 1845 he was elected to the Fellowship of the Royal Society, and five years afterwards became Professor of Natural History in New College, London. In 1851 he received the degree of LL.D. from Amherst, U.S.; in 1853 was made lecturer on Anatomy and Physiology at the Grosvenor-place School of Medicine; in 1858, Superintendent of the Food Collection, and in 1862 Examiner in Botany to the Science and Art Department of the South Kensington Museum. In 1859 he was President of the Microscopical Society, and in 1862 he was, after a severe contest, elected Coroner for Central Middlesex, which post he retained until his death.

For about twenty-five years Dr. Lankester was secretary of Section D of the British Association, of which he was one of the originators, being a most intimate friend of Edward Forbes, with whom, in his younger days, as a bachelor, he lodged in London. In conjunction with Mr. Busk, he for eighteen years edited the *Quarterly Journal of Microscopic Science*, after which he did so with his son, Mr. E. Ray Lankester, Fellow of Exeter College, Oxford.

Dr. Lankester's contributions to scientific and medical literature are very considerable. He edited the Natural History portion of the "English Encyclopædia," and contributed the article "Rotifera" to Todd's "Encyclopædia of Anatomy and Physiology." In 1849 he published a translation of Schleiden's "Principles of Scientific Botany," and, in 1859, of Kirchenmeister's "Animal Parasites." In conjunction with Dr. Letheby he contributed the article on Sanitary Science to the "Encyclopædia Britannica." Among his most popular works is the well-known "Half-hours with the Microscope." His contributions to this journal have been several, and, like all that he wrote, are marked by their admirable style and tone, as well as by the liberal spirit of modern scientific thought, which gives them an almost youthful freshness; we have, not less than others, to deplore the loss that has been sustained by ourselves in his premature decease.

To those who, like the present writer, were acquainted with him, and had the privilege of passing many pleasant hours in his company, Dr. Lankester was always genial and kindly, inspiring others with that hopefulness which was so marked a feature of his own character. He made many sincere friends, amongst whom was Henfrey the botanist, who named the genus of plants (which is grown in many nursery gardens) *Lankesteria*, after him. It was his kindly spirit which directed his attention to questions of social organisation, and he always referred to the articles by himself, in the *Daily News*—when a young man—on Medical Reform, as having been of assistance in the passing of Mr. Wakley's bill. His remains were interred in the churchyard of Hampstead Church on Tuesday last.

NOTES

NEWS concerning three of the Transit Expeditions is to hand. Advices from Capetown of Oct. 6 state that the German screw corvette *Gazelle*, bound to Kerguelen on the Transit Expedition, arrived in Table Bay and left on Oct. 4. The *Gazelle* will visit the Crozette Islands, and proceed from thence to Kerguelen. If circumstances are favourable she will search for a warm current, supposed to exist between 60 and 80 east, and endeavour to reach Wilkes Land. She will then visit the north and west coast of Australia, the coast of Guinea, and several island groups of the Pacific. Lord Lindsay had arrived out and left for Mauritius in his yacht, there to watch the transit of Venus. A Cairo correspondent of the *Daily News*, writing under

date Oct. 20, sends a long account of the preparations made by the Egyptian party. General Stanton, the Consul-General, has taken the greatest interest in the expedition, and put himself to considerable trouble to make everything smooth for the party and enable them to make all the necessary arrangements. All the instruments have arrived safely, and Capt. Browne, the chief of the party, has determined to erect his observatories on the top of the Moquattam Hills, a distance of about three miles in a direct line from Shepheard's hotel. They are about 600 feet in height and overlook the whole country. Capt. Browne, who has been carefully observing the atmosphere, finds it free of moisture, at least about sunrise; which is most important, as the maximum altitude that will be observed will be only 15°. It is at present the intention to form a camp on the top of the hill, the tents having been furnished by the Egyptian Government. Mr. Dixon, a civil engineer in Cairo, has been of great assistance in the matter of transit. Capt. Abney was expected to leave for Thebes on the 26th. Admiral Ommamney had arrived at Alexandria, but to what party he would be attached was not known.

THE generally well-informed London correspondent of the *Scotsman* states that another Arctic Expedition will be despatched in the ensuing year under the auspices of the Government and the Royal Geographical Society. He believes that it is so far considered an accepted fact that the expedition will leave these shores in the spring of 1875, inasmuch as it has the approval of the Premier.

SOME time since we pointed out the extreme inconvenience of the form and manner in which our learned societies publish their "Transactions." Anyone who is not a Fellow, for example, of the Royal Society, and who may wish to possess a memoir, say on some physiological subject published in the "Philosophical Transactions," is probably debarred from doing so by finding that he must purchase with the memoir which he wants a number of others belonging to the most diverse subjects, pure mathematics being almost invariably one. We advocated, as the common-sense remedy for this state of things, the sale of separate copies of each memoir. We were not aware at the time that this was actually done by the Linnean Society. After the completion of the twenty-sixth volume of its "Transactions," it was decided by the Council that twenty-five separate copies of each memoir should be kept for sale. Probably because the arrangement is not generally known, the sale of the part of the "Transactions" is still as good, if not actually better than that of the memoirs which they contain. The price is, however, proportionally higher, which may have something to do with this. Thus the part of the "Transactions" containing Prof. Owen's memoir on the King Crab is sold to Fellows for 9s., to the public for 12s. The corresponding prices of the memoir itself (of which no separate copies have been sold) are 7s. 6d. and 10s. But the part also contains another paper, the prices of which are 4s. 6d. and 6s. In one case all the available spare copies were purchased by the author.

We are glad to be able to announce that a considerable portion of the galleries of the late International Exhibition at South Kensington, taken by the India Office, will be devoted to the display of Natural History collections of that department of the Government. The fact of the collections having been kept in an unavailable form for so many years past has always been a great grievance to working naturalists, and has called forth many remonstrances, from ourselves among others.

MR. RICHARD LYDEKKER, B.A., of Trinity College, Cambridge, second in the First Class of Natural Sciences Tripos in 1871, has been appointed to the Palæontological Department of the Geological Survey of India in the room of the late Dr. Stoliczka. Mr. Lydekker left some months since for India,

in company with some friends, their expedition having the combined objects in view of sporting and the pursuit of natural history, and has passed most of the interval in Cashmere and Thibet, where he is believed to have made very considerable collections—zoological, botanical, and geological.

MR. MARTIN, Senior in the Natural Science Tripos of 1873, was last week elected to a Fellowship at Christ's College, Cambridge.

GODFREY'S Laboratory, Maiden Lane, Strand, in which the Hon. Robert Boyle worked out his phosphorus experiments, has been converted into a Roman Catholic chapel.

SOME of the Paris newspapers announced that M. Wurtz, Dean of the Faculty of Medicine at Paris, would be obliged to resign; the *Figaro* went so far as to give the name of the intended successor of the celebrated Professor of Chemistry—a M. Depaul. The rumour happily has proved false, and was maliciously spread because a clerk employed in the office of the Faculty had been dismissed for misdemeanour. There is, however, to be a demonstration among the students in honour of M. Wurtz, who is a great favourite with them.

THE Professorship of Applied Mathematics and Mechanism in the Royal College of Science for Ireland (Science and Art Department), vacant by the appointment of R. Ball, LL.D., F.R.S., to the Professorship of Astronomy in the Dublin University, has been filled by the appointment of H. Hennessey, F.R.S.

DR. JAMES APJOHN, F.R.S., has resigned the Professorship of Chemistry in the School of Physic attached to Trinity College, Dublin. Dr. Apjohn still holds the Professorships of Applied Chemistry and of Mineralogy in the University of Dublin. The Provost and Senior Fellows of Trinity College, Dublin, will, pursuant to the School of Physic (Ireland) Act, proceed on the 30th of January, 1875, to elect a Professor of Chemistry. There is a fixed salary of 400*l.* a year, with an additional payment of 100*l.* a year on condition that a number of Senior Sophisters nominated by the Bursar shall have free laboratory instruction. In addition the Professor has the fees for lectures and laboratory instruction, which ought to equal, at the lowest calculation, 400*l.* a year. The Professor will have the use of the college laboratory for analyses bearing on medical chemistry, such as medical and medico-legal investigations, and analyses connected with purposes of public health. Candidates are required to send their names, with the places of their education, the Universities where they have taken their medical degrees, and the places where they have practised, to the Registrar of Trinity College, Dublin, and to the Registrars of the King and Queen's College of Physicians in Ireland, Kildare Street, Dublin, on or before the 23rd of January, 1875.

IN accordance with the wishes of the Professors of the Medical School of Trinity College, Dublin, the Provost and Senior Fellows have resolved that a three months' course of practical instruction in Human Histology shall be added to the curriculum for the degree of M.B., the same to be under the superintendence of Dr. Purser, King's Professor of the Institutes of Medicine. 110*l.* has been voted to buy twenty microscopes, and we presume a room will soon be built for the purpose.

THE competitive system is making 'daily progress' in France Four *Commissaires de Police* being required, the Prefect of the Seine instituted a competition among the police-secretaries, and fourteen candidates offered themselves. A committee of examiners was appointed, the examinations have been held, and the candidates are awaiting the result, which will be issued very shortly. Up to the present time *Commissaires de Police* have been appointed at the discretion of the Prefect, only from

amongst gentlemen holding the diploma of Licentiate in Law, and secretaries of police are obliged to possess that qualification before being admitted to the examination.

EACH year the five Paris Academies—the Academy of Sciences, the Academy of Fine Arts, the Academy of Inscriptions, the Academy of Moral Sciences, and the French Academy—hold a general meeting on the 25th of October, the anniversary of 3 Brumaire, an. IV. (25th October, 1795), the day when the French Republic published the law organising the National Institute. During the Restoration the meeting was held yearly on the 24th April, the day when King Louis XVIII. returned to France, with the foreign troops, after the battle of Waterloo. When the Republic was proclaimed in 1848, a decree changed the date of the annual celebration to the 25th October; but when Napoleon III. accomplished his *coup d'état*, he appointed the 19th of August, which was continued to be the date to 1870. The Republic being again proclaimed, the celebration was restored to the 25th of October. Each Academy or Class of the Institute appoints successively the president of the meeting. The turn of the Academy of Sciences having come round this year, M. Bertrand, who is the president in charge, was the chairman of the whole Institute. His being a candidate for the perpetual secretaryship has given much interest to his presidential address, which was printed at full length in all the papers, and largely approved.

THE Prefect of the Seine has appointed a Commission to inquire into the state of lightning conductors—which are in a very imperfect condition on some public buildings—and the best method of testing their efficacy. The institution of this Commission appears to have been suggested by the corresponding committee which was appointed by the British Association, and which existed during two years without any result. It is to be hoped that the Parisian Commissioners will be more successful.

THE Municipal Council of Paris will very likely ask from the Government an authorisation to establish industrial schools in that city.

AT a meeting held a year ago in Islington, a large number of influential gentlemen were appointed a committee to obtain for that large and important district a Public Library and Museum, under the "Public Libraries and Museums Act." A requisition to the vestry and overseers of the parish was circulated for signature, and the scheme has, we believe, met with general approval, so that we hope soon to see it carried into effect.

M. FAYE has officially announced himself a candidate for the post of Perpetual Secretary of the Academy of Sciences, but the chances of M. Bertrand do not appear to have been greatly altered.

THERE will be an examination at Sidney College, Cambridge, on Tuesday, April 6, 1875, and three following days, of students intending to commence residence in the following October, when (provided fit candidates present themselves) two scholarships will be awarded for natural science, one of the value of 60*l.*, and one of the value of 40*l.* The scholarships will be tenable, under certain conditions, until the time of taking the B.A. degree, or until promotion of others to greater value.

A COPY of the cœlometer, an instrument invented by Mr. W. Marsham Adams, B.A., late Fellow of New College, Oxford, for the purpose of illustrating elementary astronomy, is to be placed in the Examining Department of the Board of Trade at Tower Hill, and also on board her Majesty's training-ship *Conway*, at Birkenhead. Rear-Admiral Sir A. Cooper Key has we believe, signified his intention of applying to the Admiralty for leave to purchase one for the Naval College at Greenwich, of which he is the president.

WE have just received a paper by Dr. Pietro Pavesi, Professor of Zoology and Comparative Anatomy in the University of Genoa, entitled, "Contribuzione alla storia naturale del genere *Selaché*," in which that naturalist shows that the Rashleigh Shark (*Polysprosopus rashleighanus*) and the Broad-headed Gazer (*P. macer*), described as British by Mr. Crouch in his work on the fishes of our seas, are not, as Dr. Günther suggests in his valuable Catalogue of Fishes in the British Museum, monstrosities of *Selache maxima*, but belong to a species found in the Mediterranean, *Selache rostrata* (Macri), in which the eyes are situated at the base of the elongate, narrow, nasal snout, instead of near the point of the short snout, as they are in *S. maxima*.

WE have received a little book with a very long title, published by Messrs. Ward, Lock, and Tyler. It is called "Arcadian Walks and Drives in the North-west Suburbs of London, for the Pedestrian, Carriage, Horse, and Bicycle," and contains a variety of hygienic and other hints to pedestrians, and forty-two schemes of walks and drives in the north-west district, together with notes on the fauna, botany, &c., of the localities visited. This "booklet" would be much improved and rendered more generally useful by the addition of a map.

A GREAT deal of interest is attached to the last report of Dr. King, the superintendent of the Calcutta Botanic Gardens, for, besides the usual details as to the exchange of plants and seeds with the Royal Gardens at Kew, and other similar colonial and foreign establishments—which exchange, by the way, has not been a light affair, inasmuch as from April 1873 to March 1874, 12,812 plants and 2,532 parcels of seeds were sent to various parts of the world—we have satisfactory accounts of the cultivation of the mahogany tree, the ipecacuanha, and the Para rubber tree. The former, as is well known, is a native of Central America and the West Indies; but there are, as Dr. King tells us, a good many old mahogany trees about Calcutta, which, however, rarely if ever yield perfect seed, so that fresh plants have been obtained direct from their native country. He says, further, that "it has been abundantly proved that the tree will thrive in most parts of Bengal, and that the Indian grown timber is valuable." There are fine mahogany trees in the gardens at Saharanpore and Madras, and Dr. King doubts not that it will grow admirably in almost any part of India in situations free from frost, and where a little moisture can be secured in very dry weather. Of the few trees that were left in the Calcutta Botanic Gardens after the last cyclone in 1867, the mahoganies are by far the finest; they were planted about eight years since, and are now from 8 to 11½ ft. in circumference, 6 ft. from the ground. The quality of the wood of some of the trees blown down in the cyclones of 1864 and 1867 was found to be excellent. Such, then, are the prospects of the successful acclimatisation of one of the most valuable furniture woods known; so valuable indeed is it in European commerce, that about 40,000 tons are annually imported into Great Britain from Honduras, Jamaica, and San Domingo. So far as the increase of the ipecacuanha plants is concerned, the propagation by root and leaf-cuttings has been so successful that there is at present a stock of 63,000 living plants; whereas only four years since there were but twelve cuttings at the Cinchona Gardens, and seven out of these twelve were afterwards accidentally destroyed. Then again, with regard to the most valuable of all the india-rubber producing plants, namely, that of Para—the *Hevea brasiliensis*—six plants of which Dr. King took with him from Kew on his return to India in November last, we are told that already a few plants have been raised from cuttings taken from these six plants, and before the lapse of another year Dr. King hopes "to be able to report a considerable increase." The advantages to be obtained by the successful introduction of these trees into India are many, for besides the great superiority of the rubber

over that obtained from the East Indian figs, the principal of which is *Ficus elastica*, and consequently a higher market value, it will add to the Indian revenue by establishing a course of regular industry by a systematic tapping of the trees, and it will perhaps, to some extent, relieve the figs from a continued strain upon them, and probable future exhaustion.

IN a recently issued report on the trade and commerce of Java, we read that the total amount of Cinchona trees of all sizes and ages growing in Government plantations at the end of 1872 was 1,705,542, and the bark crop for the same year amounted to 18,000 kilogrammes.

It has recently been discovered that the bamboo contains a dangerous poison which the natives of Java extract from the cane in the following manner. The cane is cut at each joint, and in the cavity is found a certain quantity of small fibrous matter of a black colour, which is covered with an almost imperceptible coating of tissue which contains the poison. If swallowed the filaments do not pass into the stomach, but remain in the throat and produce violent inflammation and ultimately death. Experiments are to be made with various kinds of bamboo, to test the existence and nature of this alleged poison.

THE Syndicate appointed last June to collect information as to the space and accommodation required for a new Geological Museum have issued their report. They consulted the present Professor of Geology (Mr. Hughes), who considers it desirable that a very much larger number of specimens should be exhibited under glass than is the case at present; that there should be larger intervals in the arrangement of the collection; that more ample accommodation should be provided for students wishing to work at special points in detail, and for lecturers who wish to bring a class or private pupils; that work-rooms, class-rooms, and library, together with private rooms for the Professor and a Palaeontologist, which are wholly wanting at present, should be provided. The estimated space for the museum and necessary offices would be 31,700 square feet. The Syndicate do not regard the estimate as excessive, and there is no difficulty respecting a site, as the ground of the old botanic garden affords one of sufficient dimensions in proximity to the other museums of natural science. The sum of 10,500*l.*, which has up to the present time been subscribed towards a new museum as a memorial to Professor Sedgwick, would be far from sufficient for the erection of a museum such as is indicated by Professor Hughes. The cost of such a museum, with suitable fittings and furniture for every department, could not be estimated at less than 25,000*l.* The Syndicate do not consider by the terms of their appointment that they are called upon to suggest any source from which this sum can be supplied.

THE "Origin of Species" controversy has been resumed by M. Blanchard, a member of the French Institute, in the *Revue des deux Mondes*. The learned naturalist supports strong anti-Darwinian theories.

A TELEGRAM from St. Petersburg has been received at Paris, stating that the Imperial Commission appointed to survey the Sea of Aral has finished its work. The level of that large inland sea is about 165 ft. above that of the ocean.

THE signature to the letter on "Supernumerary Rainbow," in NATURE, vol. x. p. 503, should not be Joseph, but Hugh Blackburn.

THE additions to the Zoological Society's Gardens during the past week include a Bonnet Monkey (*Macacus radiatus*) from India, presented by Mr. S. T. Hughes; a Black-backed Piping Crow (*Gymnorhina leuconota*) from South Australia, presented by Mr. F. Fuller; a Speckled Terrapen (*Clemmys guttata*) from North America, presented by Mr. A. B. Duncan; a White Stork (*Ciconia alba*), two Thickknees (*Edicnemus crepitans*), European, deposited.